

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Robert Reiter et al. Examiner: Dr. Larry Helms  
Serial No.: Not yet known Group Art Unit: 1642  
Filed: Herewith  
Title: PSCA: PROSTATE STEM CELL ANTIGEN AND USES THEREOF

35 N. Arroyo Parkway, #60  
Pasadena, California 91103  
May 14, 2001

Assistant Commissioner for Patents  
Box Patent Application  
Washington, D.C. 20231

SIR:

**PRELIMINARY AMENDMENT**

Please amend the subject application as follows.

**In the Specification:**

Please replace the paragraph beginning at page 1, line 5 with the following rewritten paragraph:

-- This application is a Divisional application of U. S. Serial No. 09/564,329, filed May 3, 2000, which is a CIP of U.S. Serial No. 09/359,326, filed July 20, 1999, which is a CIP of U.S. Serial No. 09/318,503, filed May 25, 1999, which is a CIP of U.S. Serial No. 09/251,835, filed February 17, 1999, which is a CIP of U.S. Serial No. 09/203,939, filed December 2, 1998, which is a CIP of U.S. Serial No. 09/038,261, filed March 10, 1998;

claiming the priority of provisional applications, U.S. Serial No. 60/228,816, filed March 10, 1997; U. S. Serial No. 60/071,141 filed January 12, 1998 and; U. S. Serial No. 60/074,675, filed February 13, 1998. This application further claims the benefit of the filing dates of U.S. Serial No. 60/113,230 filed December 21, 1998, U.S. Serial No. 60/120,536 filed February 17, 1999, and U.S. Serial No. 60/124,658 filed March 16, 1999. The contents of all of the foregoing applications are incorporated by reference into the present application. --

Please replace the paragraph beginning at page 6, line 13 with the following rewritten paragraph:

-- **FIG. 1A.** Nucleotide sequence (SEQ ID NO:1, ATCC Designation 209612) of a cDNA encoding human PSCA.

**FIG. 1B.** Translated amino acid sequence (SEQ ID NO:2) of human PSCA. -- .

Please replace the paragraph beginning at page 6, line 16 with the following rewritten paragraph:

-- **FIG. 2.** Nucleotide sequence (SEQ ID NO:3), of a murine cDNA PSCA homologue and the translated amino acid sequence (SEQ ID NO:4) of murine PSCA. -- .

#### **IN THE CLAIMS:**

Please cancel claims 2-52 without prejudice to pursue the subject matter of these claims in a related application.

Please add new claims 53-73 as follows:

-- 53. (NEW) A method for inducing an immune response in a subject having a cancer expressing a Prostate Stem Cell Antigen (PSCA) protein, comprising

administering to the subject a PSCA protein fragment comprising a portion of a PSCA protein. --

- 54. (NEW) A method for producing an antibody by inducing an immune response in accordance with the method of claim 53 and thereby producing the antibody. --
- 55. (NEW) The method of claim 53, wherein the subject is a human. --
- 56. (NEW) The method of claim 53, wherein the subject is a rat, dog, cat, pig, horse, or mouse. --
- 57. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 1 through 123 as described in SEQ ID NO:2. --
- 58. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 2 through 50 as described in SEQ ID NO:2. --
- 59. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 85 through 123 as described in SEQ ID NO:2. --
- 60. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 46 through 109 as described in SEQ ID NO:2. --
- 61. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 18 through 98 as described in SEQ ID NO:2. --
- 62. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 22 through 99 as described in SEQ ID NO:2. --

- 63. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 21 through 50 as described in SEQ ID NO:2. --
- 64. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 46 through 85 as described in SEQ ID NO:2. --
- 65. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 50 through 64 as described in SEQ ID NO:2. --
- 66. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 67 through 81 as described in SEQ ID NO:2. --
- 67. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 21 through 99 as described in SEQ ID NO:2. --
- 68. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 71 through 82 as described in SEQ ID NO:2. --
- 69. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 85 through 99 as described in SEQ ID NO:2. --
- 70. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 18 through 50 as described in SEQ ID NO:2. --
- 71. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 46 through 98 as described in SEQ ID NO:2. --
- 72. (NEW) The PSCA protein fragment of claim 53, consisting of amino acid residues 85 through 98 as described in SEQ ID NO:2. --

-- 73. The method of claim 53, wherein the cancer expressing the PSCA protein is prostate cancer, prostate cancer metastasized to bone, ovarian cancer, tonsil cancer, bladder cancer, stomach cancer, kidney cancer, testicular cancer, small intestinal cancer, colon cancer, or pancreatic cancer. --

### REMARKS

By way of this Preliminary Amendment, applicants cancelled claims 2-52 and applicants add new claims 53-73. Accordingly, claims 1 and 53-73 are pending.

The amendment to the specification at the paragraph beginning at line 5, page 1, is merely to state the priority information and does not constitute new matter.

The amendment to the specification at the paragraph beginning at line 13, page 6, is merely to add the sequence listing indicator (e.g., SEQ ID NO:) and does not constitute new matter.

The amendment to the specification at the paragraph beginning at line 16, page 6, is merely to add the sequence listing indicator (e.g., SEQ ID NO:) and does not constitute new matter.

Support for new claim 53 can be found in the originally-filed specification of 09/564,329 at page 19, lines 10-11; page 22, lines 26-27; page 27, lines 20-23; page 47, lines 20-23; page 89, lines 7-9; and Figures 6, 9-11, 20-32, and 62-64.

Support for new claim 54 can be found in the originally-filed specification of 09/564,329 at page 19, lines 10-11; page 22, lines 26-27; page 27, lines 20-23; page 47, lines 20-23; page 89, lines 7-9; and Figures 6, 9-11, 20-32, and 62-64.

Support for new claim 55 can be found in the originally-filed specification of 09/564,329 at page 24, lines 14-15.

Support for new claim 56 can be found in the originally-filed specification of 09/564,329 at page 24, lines 14-15.

Support for new claim 57 can be found in the originally-filed specification of 09/564,329 at page 21, lines 29-30.

Support for new claim 58 can be found in the originally-filed specification of 09/564,329 at page 23, lines 4-7.

Support for new claim 59 can be found in the originally-filed specification of 09/564,329 at page 23, lines 4-7.

Support for new claim 60 can be found in the originally-filed specification of 09/564,329 at page 23, lines 4-7.

Support for new claim 61 can be found in the originally-filed specification of 09/564,329 at page 115, lines 15-16.

Support for new claim 62 can be found in the originally-filed specification of 09/564,329 at page 89, lines 7-9.

Support for new claim 63 can be found in the originally-filed specification of 09/564,329 at page 92, lines 27-28.

Support for new claim 64 can be found in the originally-filed specification of 09/564,329 at page 92, lines 28-29.

Support for new claim 65 can be found in the originally-filed specification of 09/564,329 at page 30, line 26.

Support for new claim 66 can be found in the originally-filed specification of 09/564,329 at page 30, line 26.

Support for new claim 67 can be found in the originally-filed specification of 09/564,329 at page 6, lines 18-23; and Figure 3; and page 92, lines 6-7.

Support for new claim 68 can be found in the originally-filed specification of 09/564,329 at page 22, line 24.

Support for new claim 69 can be found in the originally-filed specification of 09/564,329 at page 92, lines 29-30.

Support for new claim 70 can be found in the originally-filed specification of 09/564,329 at page 23, lines 4-7.

Support for new claim 71 can be found in the originally-filed specification of 09/564,329 at page 23, lines 4-7.

Support for new claim 72 can be found in the originally-filed specification of 09/564,329 at page 23, lines 4-7.

Support for new claim 73 can be found in the originally-filed specification of 09/564,329 in Figures 7A, 9, 11, and 15 (prostate); at page 11, lines 8-10 and Figures 21-24, 27, and

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28 (bone); Figure 7B (ovary); Figure 7A (tonsil); Figure 25 (bladder); Figure 47 (stomach); Figure 6 (kidney, testes, small intestine, bladder); Figure 39A (colon, bladder); page 39, lines 14-17 and Figure 62 and 63 (pancreas).

Entry of these amendments and the foregoing remarks is respectfully requested.

No fee is deemed necessary in connection with the filing of this Amendment. If any fee is required, authorization is hereby given to charge the amount of any such fee to Deposit Account No. 50-0306.

Respectfully submitted,



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